

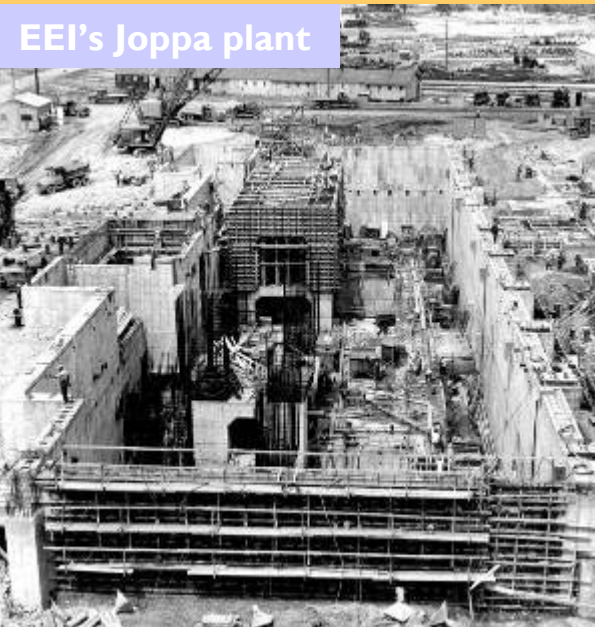
# Paducah History – Significant Events



## PGDP and power plant construction begins



PGDP Construction



EEI's Joppa plant



TVA's Shawnee plant

## 1950-1952

- Atomic Energy Commission picks old Kentucky Ordnance Works as the site for the second of three planned uranium enrichment plants
- Construction begins in 1951 on PGDP, TVA's Shawnee Steam Plant in Paducah and EEI's Joppa, IL, power plant
- First PGDP product shipped in 1952

# Paducah History – Significant Events



Drum Mountain, 2000



**1962**

## C-340 operations lead to Drum Mountain

- C-340 Complex shut down for the first time; facility was used to convert  $\text{DUF}_6$  to HF and  $\text{UF}_4$ , and  $\text{UF}_4$  to uranium metal; closed when need for HF could be met by commercial facilities
- Operated intermittently through 1973
- Emptied  $\text{UF}_4$  drums were deposited in the northwest corner of the plant, leading to the creation of Drum Mountain



# Paducah History – Significant Events



C-746-A

**West End Smelter now closed and scheduled for demolition in late 2007**

**C-746-A West End Smelter begins operations, leads to generation of aluminum ingots**



Aluminum ingots



Nickel ingots

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**1965**

- C-746-A Warehouse converted to install East and West End Smelters; smelts both reusable and contaminated metals into ingots, including gold and aluminum
- Smelter later plays a role in plant upgrades by smelting nickel recovered from equipment in Paducah, Portsmouth and Oak Ridge into nearly 10,000 tons of volumetrically contaminated ingots

# Paducah History – Significant Events



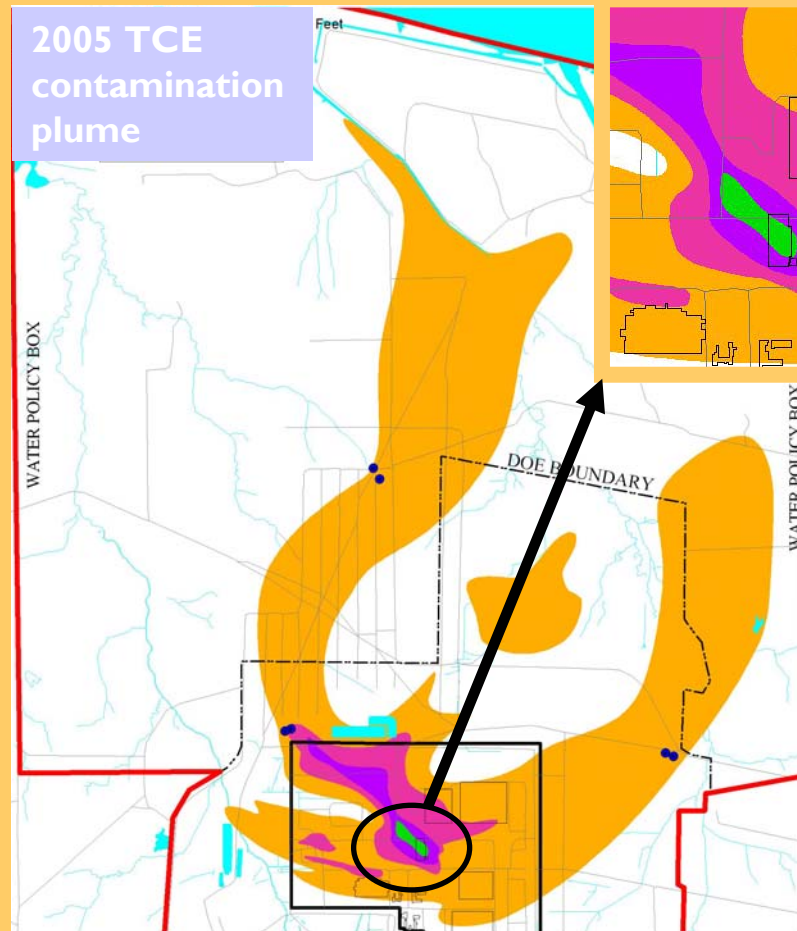
**Two major uranium enrichment upgrade programs produce scrap metal**

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## 1971-1980

- Thousands of tons of outdated equipment were stored in the northwest corner of the plant
- Production of nickel ingots and additional classified aluminum ingots using the C-746-A smelters result in scrap metal

# Paducah History – Significant Events



**1986**

- TCE-contaminated soils at C-400 discovered during sewer excavation

**TCE later determined to be primary groundwater contaminant**



# Paducah History – Significant Events



Water line

**1988**

- Contamination found in residential wells; environmental remediation program begins
- Affected residents receive bottled water
- Area wells sampled to determine extent of contamination
- DOE Water Policy established
- Extension of city water lines, to provide Water Policy residents with municipal water, begins

Site investigation



**1989**

- Phase I of CERCLA site investigation begins to determine nature and extent of off-site contamination

**Off-site contamination discovery leads to swift actions**

Postings



**1991-1992**

- Ditches and creeks posted to warn and restrict public access
- Phase II of CERCLA site investigation to determine on-site source areas begins
- RCRA Permit issued requiring corrective actions; Solid Waste Management Units grouped into WAGs for Remedial Investigations

# Paducah History – Significant Events

**Groundwater  
treatment begin**

**Pump-and-Treat facility**



**NSDD rerouting**

**Lasagna™**



## 1993

- Record of Decision (ROD) signed for Northwest Plume Groundwater Treatment System
- Use of TCE at plant is discontinued
- Action Memo signed to expand municipal water line to Water Policy Area

## 1994

- ROD signed for North South Diversion Ditch; treat and reroute plant effluent
- PGDP listed on the National Priorities List (Superfund Site)
- Federal Facility Agreement negotiations between DOE, Kentucky, and EPA begin
- ROD signed for Northeast Plume Groundwater Treatment System

## 1995-1996

- DOE EM-50 chooses PGDP for demonstration to test Lasagna™ soil cleanup technology for TCE at cylinder drop test site
- Groundwater treatment begins for Northwest Plume
- NSDD action begins; plant effluent is treated and rerouted



# Paducah History – Significant Events



C-746-U Contained Landfill

Pump-and-Treat facility



**Political debate over cleanup progress begins; EM-1 commits to expedited removal of drum mountain**

**1997**

- C-746U-Landfill constructed for non-hazardous waste
- Groundwater treatment begins for Northeast Plume



Lasagna™

**1998**

- FFA signed between DOE, Kentucky and EPA
- ROD signed selecting Lasagna™ Technology for full-scale deployment for TCE removal at cylinder drop test site



# Paducah History – Significant Events



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## 2000

### **Drum Mountain Removed**

- DOE EM-1 charts Deployment Assistance Team, also endorses electrical resistance heating (ERH) as viable dense non-aqueous phase liquid (DNAPL) cleanup technology for groundwater
- Kentucky issues Notice of Violations (NOVs) for DMSAs

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## 2001

### **Lasagna™ Treatment Successful**

- Lasagna treatment successfully completes cleanup of TCE source area at the cylinder test drop area.

# Paducah History – Significant Events



HF tank removal



UF<sub>4</sub> removal

**Accelerated  
cleanup  
actions begin**



C-603 demolition

## 2004

- Initiated accelerated actions to D&D several inactive facilities
- Completed removal of hot spots in sections 1 and 2 of NSDD
- Site Management Plan (SMP) approved by EPA and Kentucky, constituting the first approved SMP since 1999

## 2005

- About 3 million pounds of UF<sub>4</sub> dispositioned
- Signed ROD for C-400, the primary source of off-site TCE contamination
- Completed D&D of C-603 Nitrogen Facilities
- Completed the site investigation of the Southwest Plume



# Paducah History – Significant Events

October 2006



**2006**

- Completed scrap metal removal



1980s





# Paducah History – Significant Events



Lime House demolition

**2006**

- Completed D&D of C-402 Lime House
- Completed remedial design investigation for the C-400 groundwater source removal action





Please add 2007 slide and use appropriate pictures from the Accelerated Projects Section:

2007

- Completed D&D of C-405 Incinerator